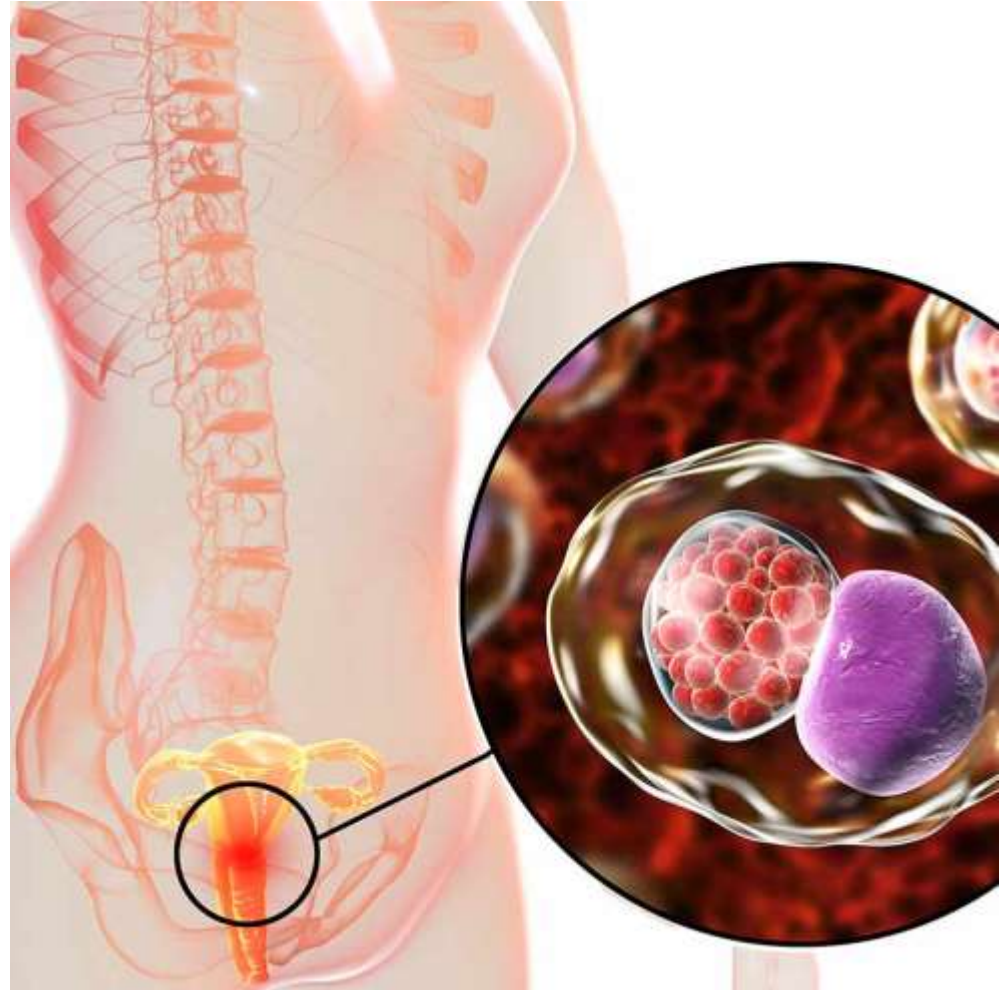




NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

Chlamydia trachomatis

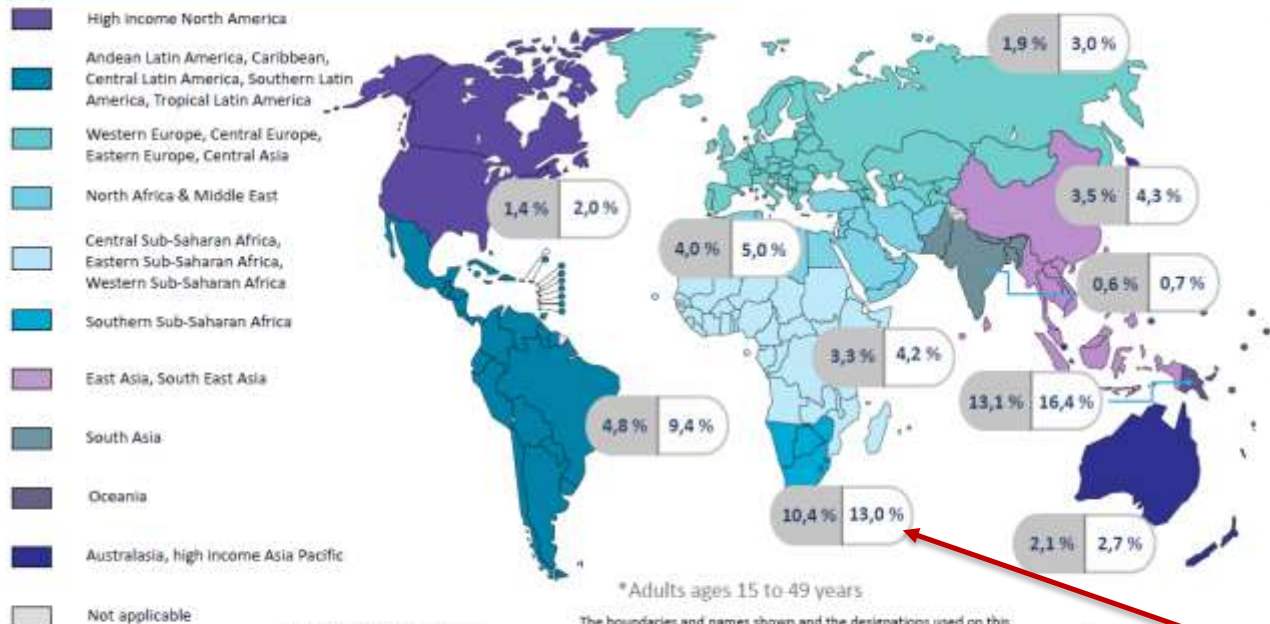


STI Awareness Week February 2022

GLOBAL EPIDEMIOLOGY

Prevalence* (%) in 10 estimation regions Chlamydia, 2016

60



Data Source: World Health Organization Map
Production: Health Statistics and Information Systems (HSIS) World Health Organization

The boundaries and names shown and the designations used on this map do not imply the expressions of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or area of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.



WHO 2015. All rights reserved.

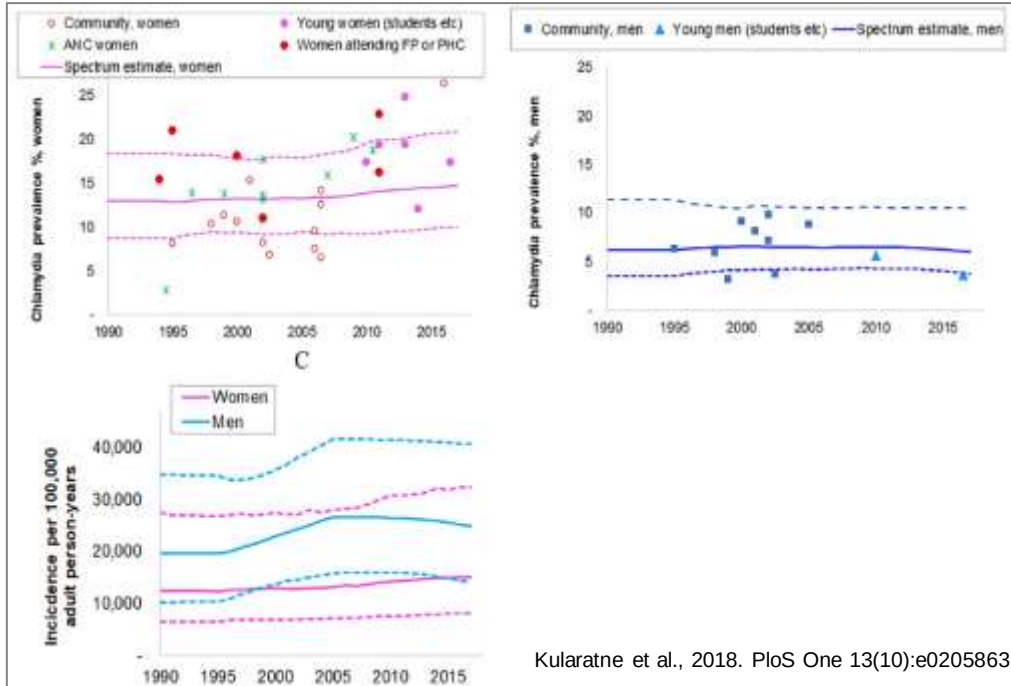
Source: Rowley J, et al. WHO Bulletin, 2019

- Most Common Bacterial Sexually Transmitted Infection (STI) globally
- WHO estimated 127 million new *Chlamydia trachomatis* infections in 2020
- Globally prevalence is highest in adolescents and young adults (≤ 24 years)

Highest in Southern Sub-Saharan Africa

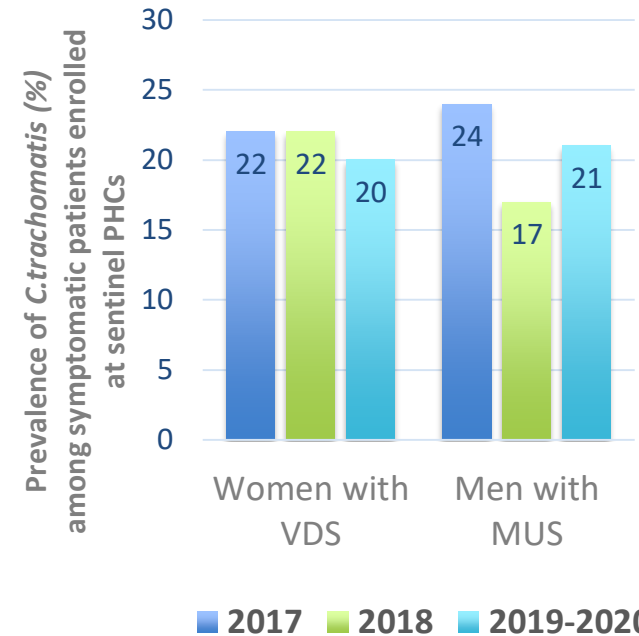
LOCAL EPIDEMIOLOGY

General Population Estimates



- The prevalence of *C. trachomatis* has remained stable for both sexes from 1997-2017
- In 2017, there were an estimated 1.9 million and 3.9 million new chlamydia cases in women and men, respectively.

STI aetiological Surveillance

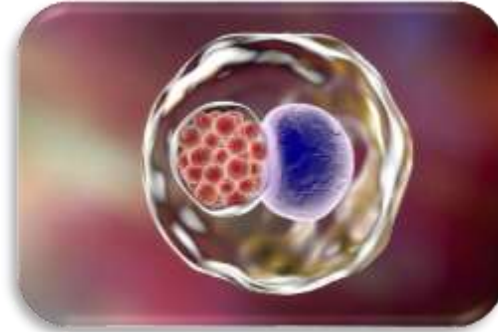


- C. trachomatis* is the most common STI cause of Vaginal discharge syndrome (VDS) in SA women
- C. trachomatis* is the second most common cause of Male Urethritis syndrome (MUS) in SA men

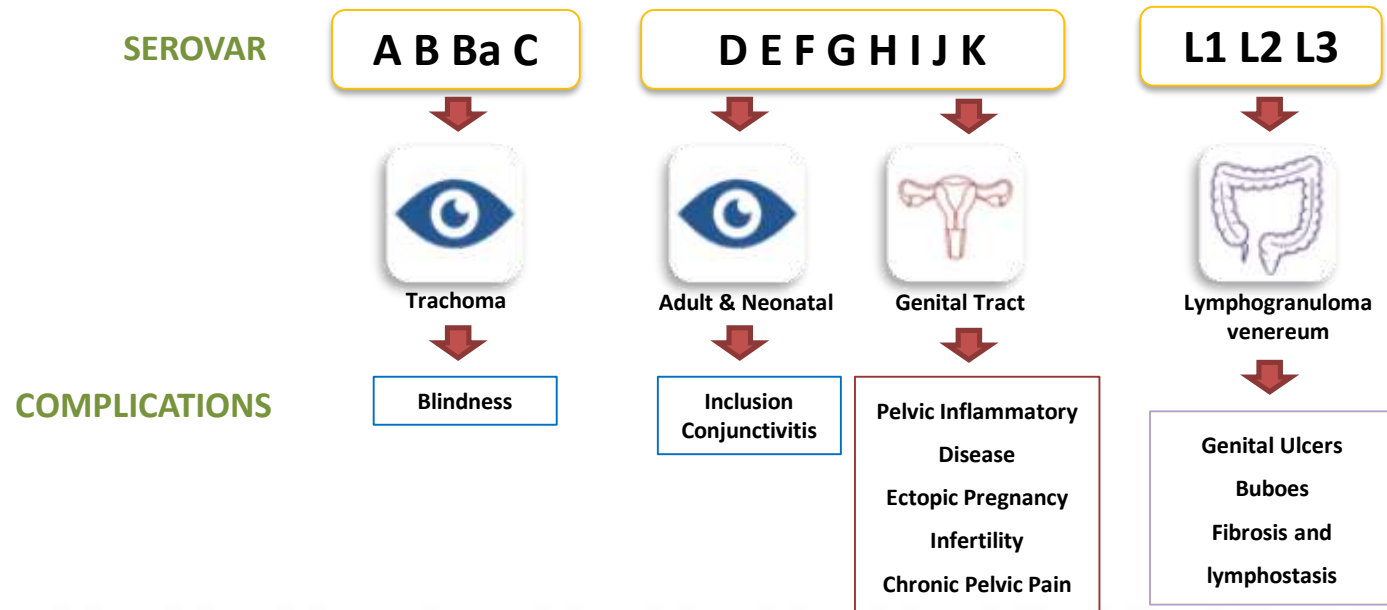
CAUSATIVE ORGANISM

- Obligate Intracellular Bacterial Pathogen
- Sexually transmitted
or

vertically transmitted from
mother to neonate during birth

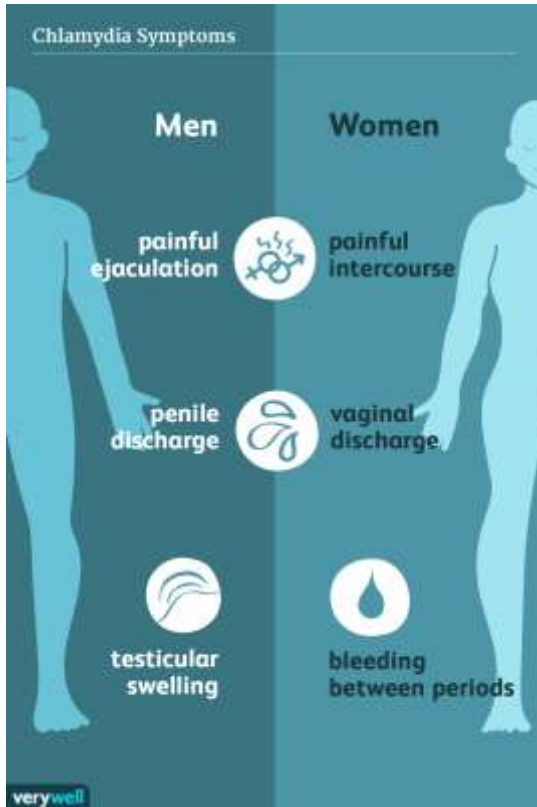


- 15 classical serovars (type), divided into:

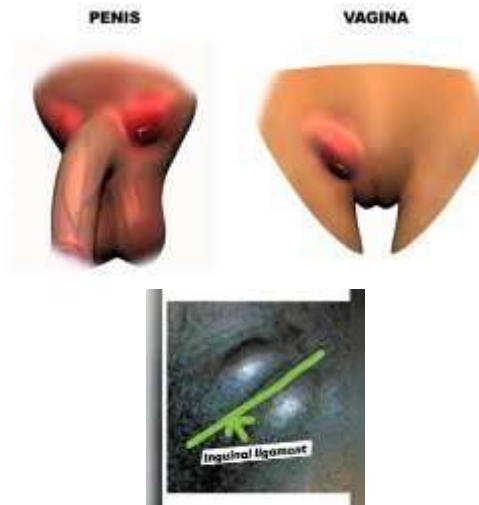


CLINICAL MANIFESTATIONS

Urogenital *Chlamydia trachomatis* infection



Urogenital **LGV** infection



- Genital ulcers
- Painful Bubo
- "goose sign"
- Proctitis
- Rectal pain, discharge, bleeding

Ocular *Chlamydia trachomatis* Infection



- Follicular Conjunctivitis- follicles develop on underside of eyelid
- Mucopurulent discharge

Neonatal Conjunctivitis		
		
Organism	<i>Neisseria gonorrhoea</i>	<i>Chlamydia trachomatis</i>
Onset	0 to 5 days	5 days to 5 weeks
Inflammation of eyelids	Extensive	Minimal
Corneal involvement	Yes	Rare
Complication	Corneal rupture	Pneumonia

DIAGNOSIS

Nucleic Acid Amplification Test (NAAT)



In-House real-time PCR assays to detect *Chlamydia trachomatis* DNA and distinguish between LGV and non-LGV serovars



Aptima assays to detect *Chlamydia trachomatis* RNA

Cell Culture

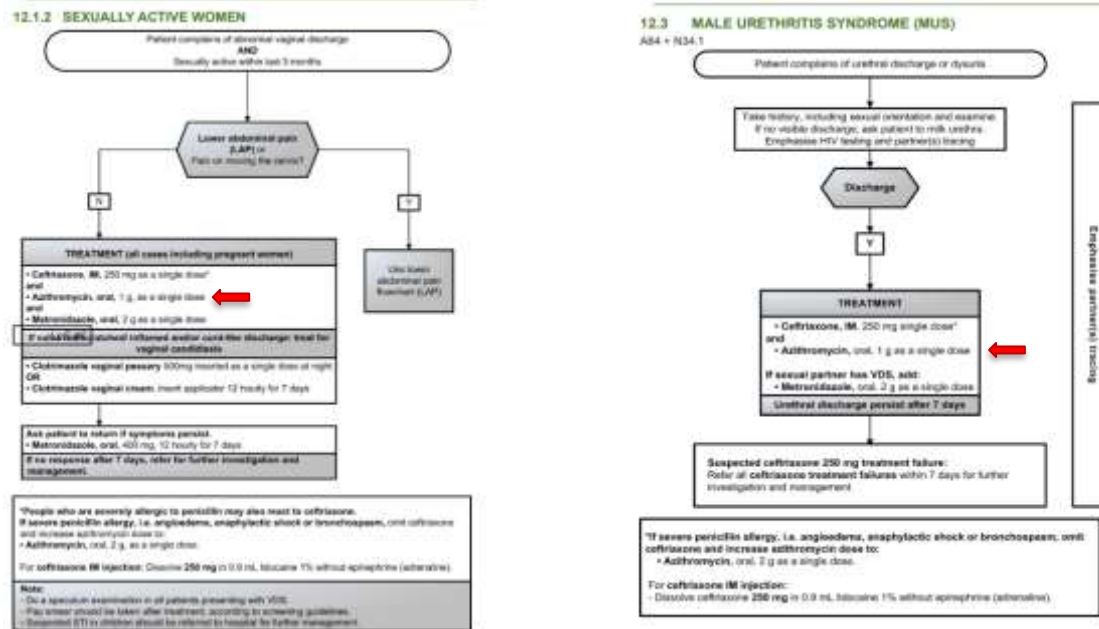


Chlamydia trachomatis can be isolated and propagated in culture and identified by fluorescence microscopy.

No longer performed at NICD

MANAGEMENT

Urogenital *Chlamydia trachomatis* infection: Azithromycin (AZM) 1 g orally in a single/stat dose



Urogenital **LGV** infection: Doxycycline (DOX)* 100 mg twice a day orally for **21 days**,

*NB DOX is contraindicated in all stages of pregnancy and whilst breastfeeding= Treat with 1g AZM, oral dose, weekly for 3 weeks

Neonates with conjunctivitis (Ophthalmia neonatorum) - may be caused by *Neisseria gonorrhoeae* or *C. trachomatis* : Stat dose of Ceftriaxone and AZM suspension and refer.
Mother and Partner to be empirically treated regardless of symptoms



INTERESTING FACTS/ KEY POINTS



- ***Chlamydia trachomatis* is often called the “silent STI” as genital infections are asymptomatic in approximately >70% of women and >50% men (WHO, 2015).**
- **Genital *C. trachomatis* infection increases the risk of HIV acquisition¹**
- **Many HIV-1 negative South African young women (16-22 years old) in Soweto (18%) and Cape Town (46%) were infected with *C. trachomatis* - the majority were asymptomatic (WISH Study²) .**
- **Unlike many other STIs, antimicrobial resistance is a rare phenomenon in *C. trachomatis*.**
- **Vaccine development for *C. trachomatis* is ongoing**

1. Galvin SR, Cohen MS. The role of sexually transmitted diseases in HIV transmission. *Nature Reviews Microbiology*. 2004;2(1):33–42
2. Barnabas et al., 2017. International Journal of STDs & AIDS 0(0):1-9. transmitted diseases in HIV transmission. *Nature Reviews Microbiology*. 2004;2(1):33–42

